

**ANNUAL ENVIRONMENTAL HEALTH SURVEY SUMMARY
DEPARTMENT OF MENTAL HEALTH
FISCAL YEAR 1998-99**

INTRODUCTION

The Institutions Program of the Environmental Management Branch (EMB) conducts annual environmental health surveys of the facilities operated by the Department of Mental Health (DMH). These surveys identify environmental health conditions and deficiencies within the facilities. The reviews also provide DMH management with an objective evaluation on which administrative decisions can be based that will ensure a safe and healthful environment for patients and staff. Additional services provided to DMH on request include training in food safety, medical waste management, epidemiological studies and special investigations.

SPECIALIZED SERVICES FOR FISCAL YEAR 1998-99

In addition to the annual surveys, specialized services are provided, as requested and jointly agreed to by the departments. During fiscal year (FY) 1998-99, the following services were provided:

In-service training was provided to nutrition services staff at the Atascadero, Napa and Patton State Hospitals. The training included a discussion of personal hygiene, safe food handling practices and the Hazard Analysis Critical Control Point (HACCP) concepts. This activity was well received by staff and the hospital administrators. This year we will be offering "Tailgate Training Sessions" as part of our surveys. These sessions are designed to respond to questions and provide subject matter instruction to the staff.

SUMMARY OF FINDINGS

The following is a summary of significant environmental health and safety conditions noted during the FY 1998-99 surveys. You may wish to review the individual survey reports for a detailed discussion of these items.

TOXIC SUBSTANCES AND HAZARDOUS WASTE MANAGEMENT

The continued use of rubber based solvent inks at the graphic arts shops at the Atascadero, Napa and Patton State Hospitals should be phased out and replaced with water based soy inks in order to minimize intrusion of chemicals into the environment. Training is available from the State Printing Plant in Sacramento in the proper use of the superior soy based inks in printing applications.

The accumulation of diverse cleaning agents that are used in similar or identical situations at the Patton State Hospital should be minimized. The cleaners and disinfectants used in a given application should be standardized for all of the programs and units at the hospital.

INJURY AND ILLNESS PREVENTION PROGRAM (IIPP)

A comprehensive Injury and Illness Prevention Program (IIPP) plan has been developed and implemented at each of the hospitals. Periodic training is given to staff and is updated regularly. Administration and staff should be commended for their efforts.

Material Safety Data Sheet (MSDS) binders were available at most of the worksites at each hospital. However, they still need to be finished with an index that refers directly to specific tabbed areas of each binder at all of the hospitals. Critical areas, such as common name of the chemical or product, emergency first aid measures and personal protective equipment required should be highlighted for rapid access in the event of an emergency.

A Lock out/Tag out program should be implemented in the main kitchen, serving kitchens and bakery at the Patton State Hospital to prevent accidental injury.

We recommend that all blood borne pathogen spill clean up kits be clearly labeled and be made readily accessible for staff at the Atascadero and Metropolitan State Hospitals. The contents of each kit should be listed on the outside of the container and should be inventoried on a regular basis. All staff should be trained regarding the use of the spill kits during an emergency.

Two satellite pharmacies were combined into one unit during the earthquake retrofitting and remodeling. This situation has created extreme overcrowding in the operating pharmacy. The other satellite pharmacy should be reopened after the remodeling is completed.

WATER

The water supply for all the State Hospitals is currently provided by permitted municipal water systems.

The status of the Camp Coombs water supply at the Napa State Hospital should be assessed and evaluated to determine if it should be permitted to operate as a public water supply or remain as a private water supply.

The water reservoir yard at the Patton State Hospital should be maintained in better condition and on a more frequent schedule to maintain the area free of weed growth. The pit areas should be kept covered and locked as a safety measure and to prevent potential vandalism.

SEWAGE

Sewage disposal services for all the State Hospitals are provided by permitted, municipal wastewater treatment facilities. No significant deficiencies were observed in the sewage collection systems at any of the hospitals during the surveys.

SOLID WASTE

The management of solid waste, from the point of generation to disposal, has been surveyed to ensure that wastes are disposed of through the appropriate waste stream. The surveys assure that refuse containers and storage areas are maintained in a manner not to create a nuisance or attract vermin, and that staff and patients are not exposed to any unnecessary health or safety risks at any point along this waste stream.

No significant deficiencies were observed in the solid waste collection systems at any of the hospitals during the surveys.

SWIMMING POOLS

Swimming pools are evaluated for the structural integrity, water quality, sanitation, routine maintenance and safety aspects of pool operation.

A permanent record of the free chlorine residual, total chlorine and pH should be kept at the swimming pool at the Patton State Hospital at all times, for reference when needed.

The exterior and interior deteriorated walls at the Patton State Hospital swimming pool, especially in the ladies and men's dressing rooms and chemical storage room should be renovated, resurfaced and painted to provide smooth, impervious, easy to clean surfaces. Deterioration and water damage to the structure is so extensive, that possibly demolition and rebuilding the facility should be given consideration.

The cracked and damaged ceramic tile located around the interior edge of the pool at the Napa State Hospital should be repaired or replaced to provide a smooth, impervious, easy to clean surface.

MAIN KITCHENS, BAKERIES AND BUTCHER SHOPS

Housekeeping, organization and maintenance in the kitchens at each of the hospitals were very good. The development of Hazard Analysis Critical Control Point (HACCP) programs has continued. Flow charts should be developed for all potentially hazardous foods at all of the hospital main and serving kitchens at the Napa, Atascadero, Patton and Metropolitan State Hospitals. It is essential that "Critical Control Points" (CCP), be identified on the flow charts. These charts should show the entire process from receiving and storage, production, transportation and service to the patients. The flow charts should incorporate an organized review of temperature documentation records of all potentially hazardous foods stored and processed at the facilities.

Evidence of rodents was noted in the main kitchens and storerooms at the Patton and Metropolitan State Hospitals and the presence of cockroaches were observed at the Metropolitan State Hospital. Vector control measures should be intensified in these areas to eradicate the pests.

The use of non-approved mobile tubs for food preparation at the Patton State Hospital should be discontinued to eliminate the potential for cross contamination. The tub surfaces beneath the sieve and the welded areas of the tubs cannot be properly cleaned and sanitized.

The final rinse cycle of the mechanical dishwashers in the main and serving kitchens at the Metropolitan State Hospital was not operating in accordance with the machine specifications during the survey. In order to effectively sanitize utensils and equipment the final rinse temperature should be between 180°F and 195°F. The dish machines should be repaired so that the final rinse temperature will reach 180°F. The final rinse pressure should be logged and repaired and maintained between 15 and 25 psi during the final rinse phase of the dishwasher.

The runoff water from the kitchen wash down operations at the Metropolitan and Napa State Hospitals discharge to the storm drain. This situation should be remedied by proper containment of the wastewater and directing it to the sanitary sewer for proper disposal.

The deteriorated walls and ceilings in the fruit walk-in refrigerator and walk-in freezer at the Metropolitan State Hospital should be renovated to provide a smooth, impervious easy to clean surface.

In order to effectively maintain proper food temperatures and prevent the possibility of food-borne illness access should be provided to refrigeration and rethermalization equipment at the Atascadero State Hospital infirmary.

SERVING KITCHENS

The temperatures of prepared sandwiches and special diet food temperatures should be recorded and documented at the Napa and Patton State Hospital serving kitchens. The temperatures of potentially hazardous food items should be monitored and recorded during delivery, holding and serving. The amount of time that the food is in the temperature danger zone (41 - 140°F) should be minimized. Whenever a temperature is recorded, the time that the temperature is taken should also be documented. Whenever a potentially hazardous food is not in compliance with a critical limit, the supervisor for the kitchen should be notified immediately to determine the appropriate corrective action. In addition, the food temperature documentation logs should be reviewed on a routine basis by the food manager and/or supervising cooks to verify that potentially hazardous foods are not being held in the temperature danger zone for more than the allowable time frames.

The refrigerator temperatures at most of the serving kitchens at the Napa and Patton State Hospitals were found to be above 41°F. They should be repaired or replaced to maintain an ambient air temperature of less than 41°F at all times.

The deteriorated floors in dining rooms 3 and 4 at the Atascadero State Hospital should be repaired or replaced to provide a smooth, impervious, easy to clean surface.

CAFETERIAS/CANTEENS

Food ingredients such as potatoes, flour and other unprotected foods at the Napa State Hospital canteen should be stored in sealable containers with tight fitting lids to prevent access by rodents and vermin. It is recommended that all containers and lids be properly labeled so that the contents are identified.

The canteens at the Patton State Hospital are in need of additional attention. Many food scoop receptacles demonstrated excessive mold growth; improved housekeeping is needed for the floors, especially beneath the shelves and behind the equipment at all of the canteens. The worn floor surfaces at the central canteen should be repaired or replaced. The electrical service at the main canteen was insufficient to meet the demand, causing circuits to be overloaded, with extensive use of extension cords. The electrical service should be renovated and upgraded to meet the demands of canteen operation. All soiled cardboard shelf-lining materials should be removed to provide a smooth, impervious, easy to clean surface and to eliminate a vermin harborage.

WAREHOUSES

Rodent activity was observed at the Patton State Hospital warehouse and the presence of cockroaches was noted in the Metropolitan State Hospital Warehouse. The vector control officer should intensify control efforts at these warehouses.

MEDICAL SERVICES

The antique bottles of chemical compounds in the pharmacy storeroom at the Napa State Hospital may be kept for museum use, but the contents should first be properly disposed of as hazardous substances under applicable regulations and as a safety measure.

Rodent activity was noted in Clinical Photography room # 36 and in the basement storage rooms at the Napa State Hospital. The vector control officer should intensify efforts at extermination of rodents at the facility.

Access areas to the flammable liquid cabinets and the electrical panels should be clear at all times in the basement storage areas at the Napa State Hospital. All flammable liquids should be stored in a State Fire Marshal approved flammable liquid storage cabinet as a safety measure.

The textured wallpaper in Central Supply at the Atascadero State Hospital should be removed. All wall surfaces should be smooth, impervious and easy to clean, so as not to provide a harborage for microbial agents generated into the air during processing of contaminated materials.

The air exhaust ventilation system in the biohazardous waste storeroom at the Metropolitan State Hospital should be adjusted to provide a minimum of four air exchanges per hour of exhaust ventilation to the outside air.

The sterile supply room of Central Supply at the Patton State Hospital provides a negative airflow by drawing air from contaminated areas of the room. The airflows should be reversed to prevent airborne microbial agents from being drawn into the sterile supply room. Common countertop surfaces should not be used for packaging of both contaminated pre sterilized instruments and of freshly autoclaved sterile instruments to prevent the possibility of cross contamination by microbial agents.

MEDICAL WASTE MANAGEMENT

The evaluation of medical waste management at all facilities was conducted with the goal of reducing the cost of medical waste disposal wherever possible. This would ensure that the program components including warning signs, container labeling, storage, handling, transportation, emergency procedures for spill cleanup and maintenance of tracking documentation were in place.

The biohazardous waste containers at the Patton State Hospital should be properly equipped with plastic liners of the proper red color to eliminate confusion.

There is still a decided tendency of staff in all areas at all of the hospitals to dispose of regular waste as biohazardous waste. The cost of disposal of regular trash by this means is excessive. Staff training should be scheduled, signs should be provided and the definition of biohazardous waste should be posted in the receptacle areas to avoid any confusion.

The biohazardous waste storeroom at the Metropolitan State Hospital should be provided with a minimum of four air exchanges of positive exhaust ventilation to the outside air.

All containers of biohazardous waste at the Metropolitan State Hospital should be properly labeled as, "Biohazardous Waste", on the lid and on the sides so as to be visible from any lateral direction. Several containers in the biohazardous waste storeroom and a few clinics were inappropriately labeled as Infectious Waste.

LAUNDRY

Laundry services for the State Hospitals are currently provided by Prison Industries Authority (PIA) facilities located in various State Prisons.

Both detergent and disinfectant should be utilized at the cartwasher at the Napa State Hospital to facilitate proper cleaning and sanitizing procedures.

The holes in the laundry room floor at the Napa State Hospital should be repaired to prevent accidents caused by tripping.

The flaking paint in the clean laundry sorting area at the Patton State Hospital should be removed and painted to eliminate a potential source of cross contamination and to facilitate cleaning by providing a smooth, impervious, easy to clean surface.

VECTOR CONTROL

Evidence of cockroaches and mice was observed in several areas at the Metropolitan, Patton and Napa State Hospitals. Control measures at these facilities appear to be effective in reducing the population of these vectors. Efforts to rodent proof the facility structures should continue to prevent the entry of rodents into the building. When evidence of rodents or cockroaches is observed, the area should be thoroughly cleaned and the pest control operator should be contacted to initiate an aggressive control program in these areas.

HOUSING

The blood-borne pathogen clean up kits (Chloro-Sorb), should be made uniform in appearance and kept at the same location as other hospital workstations. The contents of each kit should be the same at each workstation. The contents should be listed on the outside of the container and checked routinely for completeness. Appropriate training should be given to staff regarding the location, availability and use of the kits during an emergency.

The MSDS binders at all of the State Hospital areas should be standardized so that the number or letter on the index refers directly to an identical number or letter on the tabbed area of the binder. This will make the information more accessible to the user.

Additional and more frequent and thorough cleaning of bedroom areas should be provided in programs III and V of the Metropolitan State Hospital and most of the program areas of the Patton and Atascadero State Hospitals.

Many of the shower units at the State Hospitals, but especially at the Patton State Hospital, were deteriorated to a point where renovation should be considered. Proper air exhaust ventilation to the outside air of a minimum ten air exchanges per hour should be provided to prevent moisture accumulation and resultant mold growth on walls, ceilings and shower room fixtures. Air exhaust and vent grilles should be cleaned of accumulated dirt routinely, to prevent clogging of the air ducts during operation of the exhaust fans.

MISCELLANEOUS

Major improvements are needed in the operation of the barbershop at the Patton State Hospital, as described in the annual survey report. Strict adherence to procedures for cleaning and disinfecting barbering equipment and sharp instruments, such as clipper heads, scissors and razors, should be observed, to prevent potential transmission of disease between customers. A written procedure should be developed to ensure that barber tools are cleaned and sanitized after use on each customer at the Patton State Hospital. Several diseases may be transmitted from one person

to another with barber tools. These include fungi such as *Tinea capitis*, various infectious bacteria and viral infections such as HIV and *hepatitis B*. All barbering tools including clipper heads, scissors and other sharp barber tools should be cleaned with soap and water, and then treated with an EPA registered disinfectant between haircuts and before storage. The disinfectant should have a demonstrated bactericidal, fungicidal and virucidal activity. A container of sufficient size to completely submerge the barber tools should be provided and the manufacturer's instructions for contact time should be strictly followed.

It is recommended that the print shops at the Atascadero, Napa and Patton State Hospitals accelerate the process of conversion from use of rubber based solvent inks to soy based water soluble inks to minimize pollution to the environment. The reduction of pollution by organic solvents (used to clean the machines) when converting to soy inks has been established at 55%. No further progress appears to have been made on the replacement of solvent based inks. A renewed emphasis should be placed on the conversion.

Electrical power cords were laying in pools of water at the Vocational Training Auto Detailing Shop at the Napa State Hospital. Additional electric outlets should be installed at the work sites to prevent accidental injury from electrocution.

Documented safety training should be provided in the use of personal protective equipment and respirators at furniture refinishing, auto detailing and welding shops at the Napa State Hospital. Warning signs requiring the use of personal protective equipment should be posted at all areas where required. Inoperative emergency eye wash stations should be repaired or replaced for immediate access and use in the event of an emergency.

Other safety hazards observed at the Napa State Hospital include heavy items stacked to the ceiling in the auditorium projector room, electrical shop and machine shop. This type of high piled storage represents a safety hazard in the event of an earthquake.

Ground fault interrupters should be provided to electrical outlets above the sink in the barbershop at the Napa State Hospital as a safety measure due to the many electrical instruments used at this location.

An emergency eye wash station should be provided in the carpenter shop and welding shop at the Patton State Hospital. The emergency eye wash station at the print shop should be checked weekly for proper operation and water clarity.

The frequency of routine maintenance and cleaning of the food vending machines and dispensing equipment at the Atascadero State Hospital should be increased to prevent mineral buildup; accumulation of food debris and to remove accumulated dust. Cleaning schedules should be posted and monitored. Food products and condiments, such as cocoa mix and creamer should not be stored in the machines in open containers, to avoid attraction of vermin and insects. Food should be monitored routinely and all outdated food should be removed promptly.

CONCLUSIONS AND RECOMMENDATIONS

Our staff of Registered Environmental Health Specialists will continue to perform surveys during the year to identify environmental health and safety issues and will work with the Department of the Mental Health to develop corrective and preventive measures.

We believe that significant progress has been made to improve the environmental health and safety conditions at the mental health hospitals over the past several years. Management and staff should be commended for their outstanding efforts. The cooperative efforts of the hospital administrators and staff have led to the success of the program. Significant improvement has been made in the Injury and Illness Prevention Program, Hazard Communication/Right to Know program, Medical Waste Management program, Cross Connection Control program, Toxic Substances and Hazardous Waste Management programs, Recycling programs, Hazardous Analysis and Critical Control Point programs and Bloodborne Pathogen programs. We will continue to assist the individual hospitals with the on-going evolution and maintenance of these environmental health and safety programs by providing consultation, plan review, training and assistance with special projects. The environmental health survey process will "test" the systems in place and will provide feedback to hospital administrators and the Department of Mental Health.

This year we will be offering "Tailgate Training Sessions" as part of our surveys. These sessions are designed to respond to questions and provide subject matter instruction to the staff. We are available to provide environmental health training, to review facility construction plans and to respond to issues regarding environmental health problems.